

Abstract ID : 738

Title : Florida Manatees in the Western Everglades: Implications for Restoration Assessment

Category : Conservation

Student : Not Applicable

Preferred Format : Oral Presentation

Abstract : A large proportion of the Florida manatee (*Trichechus manatus latirostris*) population in southwest Florida occurs in the coastal waters of Everglades National Park and the Ten Thousand Islands. The USGS, through its Greater Everglades Science Program Place Based Studies initiative, is conducting a study to predict manatee response to changes in hydrology caused by the Comprehensive Everglades Restoration Plan. Alteration of the freshwater and estuarine ecosystems associated with restoration of the Everglades, and specifically Southern Golden Gate Estates (SGGE), is likely to affect manatees in the region. We hypothesize that manatee distribution, habitat use, and movement patterns will change because of altered water management regimes and resulting changes in near shore salinity. Aerial surveys and radio tracking tagged manatees have provided valuable means of documenting the pre-restoration use of habitats by manatees within the region affected by the SGGE restoration and the response of manatees to natural and human-induced fluctuations in freshwater inflow. On-going research shows that manatees make frequent movements from offshore seagrass beds to inland tidal creeks, where they obtain fresh water for drinking and find thermal refugia during cold weather. Tracking data and field observations of tagged manatees revealed that the spatial distribution of submerged aquatic vegetation, availability of fresh water, and bathymetry influenced manatee movements and use patterns within the Ten Thousand Islands and northern Everglades. This information, combined with water-quality data obtained from monitoring stations, is being incorporated into an individual-based ATLSS model, which will be used to better understand and predict manatee response to different restoration scenarios. This project also fills a significant void in our knowledge of manatee ecology, as there is very little existing information on manatee population biology and habitat use in the western portion of the Everglades in Florida.